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DEC 12 2000

Mr. Paul Pardi, RCRA Group Leader
and FFCA Project Manager
Ohio Environmental Protection Agency
Division of Hazardous Waste Management
401 East 5th Street
Dayton, Ohio 45402-2911

DOE-0179-01

Mr. Michael Savage, Assistant Chief
Ohio Environmental Protection Agency
Division of Hazardous Waste Management
Lazarus Government Center
1800 Watermark Drive
Columbus, Ohio 43216-1049

Dear Mr. Pardi and Mr. Savage:

PROPOSED CHANGES TO THE FERNALD ENVIRONMENTAL MANAGEMENT PROJECT SITE TREATMENT PLAN

Enclosed are proposed changes to the Fernald Environmental Management Project's (FEMP) Federal Facility Compliance Act (FFCA) Site Treatment Plan (STP). These changes reflect revisions to schedules and scope of several STP preferred options as discussed in an August 15, 2000, meeting with Phil Harris and Paul Pardi of the Ohio Environmental Protection Agency (OEPA) and a November 6, 2000, telephone conversation with Phil Harris.

The proposed changes to the STP are summarized as follows:

1. Section 3.7.1, Toxic Substance Control Act (TSCA) Incinerator Phase II, has been revised to: 1) provide new milestones for completing shipment of Batches 10 and 11; 2) revise the milestone for providing schedules for additional off-site shipments; and 3) include the option of treating wastes at a commercial mixed waste incinerator.

2. A new milestone for completing off-site shipments of mixed waste is proposed for Section 3.1.8, Organic Treatment Project. This section has also been revised to include the option of treating these wastes at an alternate off-site mixed waste

treatment facility. Currently, Materials and Energy Corporation is the only treatment option identified for this project.

3. Section 3.1.10, Uranium Waste Disposition (UWD) materials, has been revised to include the treatment of approximately 450 pounds of mixed waste containing transuranic constituents and an additional 350 pounds of mixed low-level wastes. These wastes are currently being stored in two T-Hopper containers.

4. Minor changes have been made to several STP sections to identify the completion of additional milestones and to clarify the inventory addressed under existing milestones.

Additional information and justification for these changes are provided in Enclosure 1. A complete version of the STP with the proposed changes is provided as Enclosure 2. All proposed changes to the STP have been made using redlines or strikeouts for easy identification.

If you have any questions or require additional information, please contact Shannon Kaster at (513) 648-3157.

Sincerely,

Stephen H. McCracken
Director

FEMP:Kaster

Enclosures

cc w/enclosures:
S. Kaster, OH/FEMP
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A. Tanner, OH/FEMP

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ENCLOSURE 1

Justification for Proposed Changes to the FEMP's Site Treatment Plan

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3.1.7.1 Waste Streams for which Technology Exists - Preferred Option: TSCA Incinerator, Phase II

Phase II of the TSCA Incinerator Preferred Option provides updated schedules for the shipment of individual batches of liquid mixed waste to the TSCA Incinerator and/or commercial mixed waste incineration facilities. These schedules are based on the TSCA Incinerator ~~FY 2000~~ Burn Plan and commercial facility waste acceptance timeframes. Since capacity at the TSCA Incinerator is allocated on a fiscal year basis, schedules for shipping additional batches of liquid mixed waste will be established in future amendments to the STP.

Schedule for Completing Shipment: Shipment of ~~Batches 9, 10 and 11~~ Batch 9 to the TSCA Incinerator will be completed by September 30, 2000†. (COMPLETED) Shipment of Batch 10 to the TSCA Incinerator or a commercial mixed waste incineration facility will be completed by September 30, 2001†. Shipment of Batch 11 to the TSCA Incinerator will be completed by September 30, 2002†.

Schedule for Providing Additional Milestones for Shipment: Schedules for shipping additional batches of mixed waste to the TSCA Incinerator or a commercial mixed waste incineration facility will be provided by ~~December 31, 2000~~ December 31, 2001†.

Rationale for Change in Schedule:

Recent changes in management and operation of the TSCA Incinerator have impacted TSCA shipping schedules. IT Corporation assumed management of the TSCA Incinerator on January 1, 2000. IT has changed the TSCA Incinerator operating schedule so that it operates for three months on and three months off to accommodate activities such as maintenance and testing. IT has also revised the Waste Acceptance Criteria (WAC) to require additional analyses for Uranium isotopes. The only lab that can currently perform these analyses is the lab at the DOE Oak Ridge Y-12 complex. As a result, waste characterization and shipment timeframes have increased, impacting schedules for the shipment of Batches 10 and 11.

The State of Tennessee has exhibited increased review cycles for waste acceptance/approval as well as burn plan approval for TSCA Incinerator waste shipments. This has also impacted schedules for shipment from the FEMP.

Rationale for Addition of a Commercial Facility:

The addition of a commercial facility to this Preferred Option will give the FEMP more flexibility in meeting schedules for shipping non-PCB batches of organic liquids. Currently, the TSCA Incinerator is the only option available for the incineration of mixed organic liquids containing regulated levels of PCBs. However, non-PCB batches could also be shipped to a commercial incinerator. Batch 10 does not contain PCBs and could be treated at a commercial incineration facility. Batch 11 contains PCBs and is currently planned for shipment to the TSCA Incinerator.

3.1.8 Waste Streams for Which Technology Exists - Organic Treatment Project

The Organic Treatment Project involves the off-site shipment of mixed wastes containing organic constituents and debris for treatment to Materials and Energy Corporation (M&EC) in Oak Ridge, Tennessee or an alternate off-site mixed waste treatment facility. Treatment at M&EC will be conducted under the DOE complex-wide Broad Spectrum Contract.

Schedule for Entering into Contract: March 31, 1999 †**(COMPLETED)**

Schedule for Initiating Preparation of Wastes for Transport: September 15, 1999 † **(COMPLETED)**

Schedule for Completing Shipment for Off-Site Treatment of Mixed Wastes Identified in the ~~1998~~ Most Recent Version of the STP Annual Update: ~~September 30, 2001~~ July 30, 2003 †

Rationale for Change in Schedule:

M&EC has not started construction of treatment processes and does not yet have CERCLA off-site authority.

Five shipments are currently scheduled to M&EC; the first shipment is tentatively scheduled for February/March 2001.

M&EC has scheduling issues with other customers, which consumes treatment capability for up to six months at a time. These commitments will impact schedules for treating the remaining inventory of wastes assigned to this preferred option.

The addition of an alternate off-site mixed waste treatment facility to this Preferred Option will give the FEMP more flexibility to meet the STP milestone date.

3.1.10 Waste Streams for Which Technology Exists - Uranium Waste Disposition (UWD) Materials and T-Hopper Wastes

The FEMP has identified mixed waste included in a population of uranium materials declared waste in December 1998. A portion of these materials are enriched (contain >1% U235) and may require blending to reduce uranium content prior to processing. In addition, the FEMP has identified approximately 450 pounds of mixed waste containing transuranic constituents above 100 nCi/g and 350 pounds of mixed low-level waste. These wastes are currently being stored in two T-Hopper containers. Stabilization options being evaluated for these waste streams include on-site treatment or securing a contract with an off-site treatment facility.

Schedule for Entering into Contract: The contract for implementation of this preferred option will be entered into by June 30, 2003†.

Schedule for Providing Additional Milestones for Treatment: Additional milestones for treating the UWD inventory and the T-Hopper Wastes will be provided by December 31, 2003†.

Rationale for Addition of New Waste Type:

Recent identification of waste containing transuranic constituents at a concentration greater than 100 nCi/g at the FEMP.

UWD Materials and T-Hopper Wastes contain similar RCRA constituents (TCLP metals). The preferred option for these wastes is treatment by stabilization.

Stabilization may reduce the concentration of transuranic constituents in the T-Hopper wastes to less than 100 nCi/g. This would allow the treatment residues to be disposed of as low-level waste.

OTHER CHANGES

1. Clarification has been added to Sections 3.1.2 (UNH Treatment System), 3.1.3 (Thorium Nitrate Treatment System), and 3.1.4.1 (Wastewater Treatment, Phase II) to indicate that all milestones currently associated with these projects have been completed.

2. The title of the last milestone in Sections 3.1.8 (Organic Treatment Project), and 3.1.9 (Inorganic Treatment Project) has been changed from "Schedule for Completing Shipment for Off-Site Treatment of Mixed Wastes Identified in the 1998 Annual STP Update" to "Schedule for Completing Shipment for Off-Site Treatment Of Mixed Wastes Identified in the Most Recent Version of the Annual STP Update." This will allow new inventory identified in each Annual STP Update to be addressed under the existing project milestones unless new milestones are proposed in the Update.

3. Section 3.1 (Mixed Waste Streams for Which Technology Exists) has been updated to state that there are eleven Preferred Options identified in Sections 3.1.1 through 3.1.11 of the STP.

ENCLOSURE 2

Revised Site Treatment Plan

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
PROPOSED SITE TREATMENT PLAN
PLAN VOLUME

1.0 PURPOSE AND SCOPE

1.1 The U.S. Department of Energy (DOE) is required to prepare a plan for developing treatment capacities and technologies for each facility at which DOE generates or stores mixed waste, pursuant to Section 3021(b) of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C 6939c(b), as amended by Section 105(a) of the Federal Facility Compliance Act [(P.L.102-386) (FFCAct)]. The mixed waste must be treated or otherwise managed in accordance with the land disposal restriction standards under Section 3004 of RCRA. Upon submission of the plan to the appropriate regulatory agency, the FFCAct requires the recipient agency to solicit and consider public comments, and approve, approve with modification, or disapprove the plan within six months. The agency is to consult with EPA and any State in which a facility affected by the plan is located. Upon approval of a plan, the regulatory agency must issue a FFCAct Order requiring compliance with the approved plan.

1.2 The DOE Fernald Office, hereinafter referred to as DOE-FN, has prepared this Proposed Site Treatment Plan (PSTP) for mixed waste at the FEMP, which identifies how DOE-FN proposes to obtain treatment of the site's mixed waste or develop technologies for treatment where technologies do not exist or need modification. For some waste streams, a plan and schedules for characterizing wastes, undertaking technology assessments, and for providing the required plans and schedules for developing capacities and technologies, as appropriate, are provided.

1.3 This section intentionally left blank.

1.4 This section intentionally left blank.

1.5 This section intentionally left blank.

1.6 This section intentionally left blank.

2.0 IMPLEMENTATION OF THE PROPOSED SITE TREATMENT PLAN

The mechanisms and procedures for administering and implementing the treatment plans and schedules in Sections 3.0 through 5.0 of the Plan Volume will be established in the FFCAct Order.

2.1 This section intentionally left blank.

2.2 Modification of Technologies

Emerging or new technologies not yet considered that provide opportunities to manage waste more safely, effectively, and at lower cost than the current technologies identified in the PSTP may be identified in the future. Working closely with regulators and other interested parties during the implementation of the PSTP, DOE will continue to evaluate and develop technologies that offer potential advantages in the areas of public acceptance, risk abatement, performance, and life-cycle cost. Should more promising technologies be identified, DOE may request a modification of its PSTP in accordance with provisions of the implementing FFCAct Order.

3.0 MIXED LOW LEVEL WASTE STREAMS

The Plan Volume of the PSTP establishes overall schedules for achieving compliance with LDR requirements for mixed wastes at the FEMP. The schedules include those activities required to bring existing waste treatment facilities or technologies into operation, and those required to develop new facilities and capacity for treatment. The assumptions upon which individual schedules are dependent are contained in Sections 3.0 through 5.0 of the Background Volume. The schedules may be affected if the underlying assumptions change. The project completion dates provided on the schedules do not include final disposition of treatment residues. Dates provided in the Plan Volume schedules become enforceable through the procedure established in the implementing FFCAct Order.

3.1 Mixed Waste Streams for which Technology Exists

The FEMP has identified eleven ~~seven~~ Preferred Options for the treatment of characterized mixed low level waste streams in inventory. Only minor modifications of the Preferred Option, if any, are needed to treat the wastes. These preferred options and their respective waste streams are presented in Sections 3.1.1 through ~~3.1.7~~ 3.1.11.

3.1.1 Waste Stream for which Technology Exists - Preferred Option: Hydrofluoric Acid (HF) Neutralization System

Project Name: HF RCRA Closure

The FEMP mixed waste stream for which the Preferred Option is identified as the HF Neutralization System is listed in Table 1 of the Background Volume. Treatment can be accomplished through the use of on-site existing facilities. Treatment of this single waste stream is planned as a RCRA Closure of a Hazardous Waste Management Unit (HWMU) using the HF Neutralization System. Detailed information on this treatment is located in Section 3.1.1 of the Background Volume.

Consistent with closure plan requirements, this project is expected to be completed within 180 days after final approval of the Closure Plan Information and Data (CPID) from OEPA. The schedules presented below reflect dates established by the approved closure plan.

MIXED WASTE STREAM FOR WHICH TECHNOLOGY EXISTS

Project Start Date: January 31, 1992 **(COMPLETED)**

Schedule for submitting all applicable permit applications: Not applicable. Treatment of this waste stream will be performed under a RCRA Closure of a HWMU. The CPID for this project was submitted on July 17, 1994 and approved by the OEPA in February 1995. **(COMPLETED)**

Schedule for entering into contracts: The contract necessary for this project is in place. **(COMPLETED)**

Schedule for initiating construction: December 31, 1994 **(COMPLETED)**

Schedule for conducting systems testing: June 30, 1995 **(COMPLETED)**

Schedule for commencing operations: June 30, 1995 **(COMPLETED)**

Schedule for processing backlogged and currently generated mixed wastes: June 30, 1995 through August 30, 1995 **(COMPLETED)**

Project Completion Date: September 30, 1995 **(COMPLETED)**

PROJECT UPDATE

Treatment of this waste stream was completed as scheduled.

3.1.2 Waste Stream for which Technology Exists - Preferred Option: Uranyl Nitrate Hexahydrate (UNH) Treatment System

Project Name: UNH Neutralization System

The FEMP mixed waste stream for which the Preferred Option is identified as the UNH Treatment System is listed in Table 2 of the Background Volume. For clarity, it should be noted the scope of waste treatment under this Preferred Option is more extensive than that covered by the Director's Final Findings and Orders (DF&O), dated December 27, 1994 directing treatment of UNH material. Specifically, this Preferred Option includes treatment of approximately 30,000 gallons of radiologically contaminated nitric acid from the Nitric Acid Recovery (NAR) system. This waste stream was not included within the above-referenced DF&O. Treatment of the UNH waste stream associated with this preferred option was completed by September 25, 1995. Treatment can be accomplished through the use of on-site existing facilities augmented with new piping and new skid-mounted pumps. The FEMP is a CERCLA site and has been working with USEPA and OEPA to treat this waste on-site through CERCLA Removal Action #20. Detailed information on this treatment is located in Section 3.1.2 of the Background Volume.

The construction phase of the UNH Neutralization System is scheduled and proceeding.

MIXED WASTE STREAM FOR WHICH TECHNOLOGY EXISTS

Project Start Date: November 30, 1993 **(COMPLETED)**

Schedule for submitting all applicable permit applications: Not applicable. No permit required. Treatment of this waste will be performed under CERCLA Removal Action #20. **(COMPLETED)**

Schedule for entering into contracts: No contracts anticipated.

Schedule for initiating construction: May 31, 1994 **(COMPLETED)**

Schedule for conducting systems testing: March 24, 1995 **(COMPLETED)**

Schedule for commencing operations: Operations is the date the FEMP began treatment utilizing this Preferred Option.
March 24, 1995 **(COMPLETED)**

Schedule for processing backlogged and currently generated mixed wastes: March 24, 1995 - April 30, 1996 (COMPLETED)

Project Completion Date: April 30, 1996† (COMPLETED)

† Denotes milestone dates

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3.1.3 Waste Stream for which Technology Exists - Preferred Option: Thorium Nitrate Treatment System

Project Name: Thorium Nitrate

The FEMP mixed waste stream for which the Preferred Option is identified as Thorium Nitrate Treatment System is listed in Table 3 in the Background Volume. Treatment of this single waste stream is planned under CERCLA Removal Action #9. Treatment of this waste stream will occur on-site using a vendor provided service. Detailed information on the alternatives is located in Section 3.1.3 of the Background Volume.

MIXED WASTE STREAM FOR WHICH TECHNOLOGY EXISTS

Project Start Date: December 31, 1994 **(COMPLETED)**

Schedule for submitting all applicable permit applications: Not applicable. Treatment of this waste stream will be performed under CERCLA Removal Action #9. The Project Specific Plan for this project was submitted in August 31, 1995. **(COMPLETED)**

Schedule for entering into contracts: Award contract with vendor for treatment. May 31, 1995 **(COMPLETED)**

Schedule for initiating construction: Vendor will supply and mobilize equipment needed for treatment. August 31, 1995 **(COMPLETED)**

Schedule for conducting systems testing: Systems testing will determine Operational Readiness using water to simulate operations. September 30, 1995 **(COMPLETED)**

Schedule for commencing operations: Operations will begin with the recirculation of the thorium waste as specified in the Project Specific Work Plan. September 30, 1995 **(COMPLETED)**

Schedule for processing backlogged and currently generated mixed wastes: September 30, 1995 - February 29, 1996 (COMPLETED)

Project Completion Date: February 29, 1996† (COMPLETED)

† Denotes milestone dates

3.1.4 Waste Streams for which Technology Exists - Preferred Option: Wastewater Treatment, Phase 1

Project Name: Liquid Mixed Waste Project

The FEMP mixed waste streams for which the Preferred Option is identified as Wastewater Treatment are located in Table 4 of the Background Volume. Treatment of these waste streams will occur on-site in an existing facility. This project is part of the Liquid Mixed Waste Project. Liquids will be bulked, tested and a determination will be made whether they are acceptable for the FEMP Wastewater Treatment System. Detailed information on this treatment is located in Section 3.1.4 of the Background Volume.

The Liquid Mixed Waste Project is designed to address treatment and disposal of all liquid mixed waste currently in storage through the WWTS or the TSCA Incinerator Preferred Options.

MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS

Project Start Date: October 31, 1994 **(COMPLETED)**

Schedule for submitting all applicable permit applications: Not applicable. This project was initiated as part of CERCLA Removal Action #9 (RA #9). RA #9 was modified to clarify the scope of work and is consistent with the FEMP's Investigation Derived Waste (IDW) policy and NPDES permit and meets the requirements of the RCRA wastewater treatment unit exclusion. Activities conducted under RA #9 have been incorporated into the Operable Unit 3 Final Record of Decision (ROD).

Schedule for entering into contracts: No contract is required.

Schedule for initiating construction: No construction is required for this project.

Schedule for conducting systems testing: Tank set-up and testing of WWTS is complete. October 31, 1994 **(COMPLETED)**

Schedule for commencing operations: Operations is the date the FEMP will begin treatment utilizing this Preferred Option. February 29, 1996† **(COMPLETED)**

Schedule for processing backlogged and currently generated mixed wastes: February 29, 1996 through September 30, 1996 **(COMPLETED)**

Project Completion Date: September 30, 1996† **(COMPLETED)**

3.1.4.1 Waste Streams for Which Technology Exists - Preferred Option: Wastewater Treatment, Phase II

Section 3.1.4.1 provides updated schedules for treating FEMP mixed waste streams for which the preferred option is Wastewater Treatment. As part of Phase II of this preferred option, these waste streams will be treated on-site using the FEMP's Advanced Waste Water Treatment System (AWWT).

Waste waters are introduced into the AWWT-Slurry Dewatering Facility for precipitation and filtration of metal constituents. Filtrate from this process is directed to AWWT Phase 2 which consists of an activated carbon adsorption unit operation. Organic constituents are removed with the filter cake from the precipitation/filtration process or treated through AWWT Phase 2 if they remain in the filtrate.

Schedule for Initiating Treatment of Mixed Waste Identified in the 1998 STP Annual Update: November 1, 1999† **(COMPLETED)**

Project Completion Date: March 1, 2000† (COMPLETED)

† Denotes milestone dates

3.1.5 Waste Streams for which Technology Exists - Preferred Option: Ohio Mobile Stabilization System

Project Name: Stabilization Project

The FEMP mixed waste streams for which the Preferred Option is identified as Ohio Mobile Stabilization System are listed in Table 5 of the Background Volume. Treatment of these waste streams will occur on-site using a vendor provided mobile service. Detailed information on this treatment is located in Section 3.1.5 of the Background Volume.

The FEMP published a request for information in the *Commerce Business Daily*. Multiple responses were received from companies capable of performing Mobile Stabilization.

The FEMP implemented the Stabilization Project as part of CERCLA Removal Action #9 (RA #9). Treatment operations began after obtaining Ohio EPA approval. Activities conducted under Removal Action #9 have been incorporated into the Operable Unit 3 Final Record of Decision (ROD).

MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS

Project Start Date: October 31, 1994 **(COMPLETED)**

Schedule for submitting all applicable permit applications: Not applicable. This project was initiated as part of RA #9. Activities conducted under Removal Action #9 have been incorporated into the Operable Unit 3 Final Record of Decision (ROD).
The Project Specific Plan for this project was submitted in September 30, 1995. **(COMPLETED)**

Schedule for entering into contracts: May 31, 1995 **(COMPLETED)**

Schedule for initiating construction: Vendor will supply a fully constructed mobile system. October 31, 1995† **(COMPLETED)**

Schedule for conducting systems testing: November 30, 1995† Complete Operational Readiness Review. **(COMPLETED)**

Schedule for commencing operations: Operations is the date the FEMP will begin treatment utilizing this Preferred Option. November 30, 1995† **(COMPLETED)**

Schedule for processing backlogged mixed wastes:
November 30, 1995 through September 30, 1996 **(COMPLETED)**

3.1.5 Waste Streams for which Technology Exists - Preferred Option: Ohio Mobile Stabilization System (cont.)

Project Completion Date: September 30, 1996† **(COMPLETED)**

† Denotes milestone dates

3.1.6 Waste Streams for which Technology Exists - Preferred Option: Ohio Mobile Chemical Treatment System

Project Name: Chemical Treatment Project

The FEMP mixed waste streams where the Preferred Option is identified as Ohio Mobile Chemical Treatment System are listed in Table 6 of the Background Volume. Treatment of these waste streams will occur on-site using vendor provided services, except for some debris (as defined in RCRA) macroencapsulation, which will occur off-site at a commercial facility. *Detailed information on this treatment is located in Section 3.1.6 of the* Background Volume.

Multiple contracts will be entered into for the performance of treatment for each technology in the Chemical Treatment Project. Specific work plans will be developed for each on-site treatment technology. The technology specific work plans will be submitted to the State for approval. *Construction of the facilities will be initiated upon State approval* of the technology specific work plans.

MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS

Project Start Date: October 31, 1994 **(COMPLETED)**

Schedule for submitting all applicable permit applications: Not applicable. It is anticipated that this project will be initiated as part of CERCLA Removal Action #9. This project was initiated as part of CERCLA Removal Action #9. Activities conducted under this removal action have been incorporated into the Operable Unit 3 Final Record of Decision (ROD). The Draft Work Plan for this project will be submitted in November 30, 1995.† **(COMPLETED)**

3.1.6 Waste Streams for which Technology Exists - Preferred Option: Ohio Mobile Chemical Treatment System (cont.)

A schedule for commencing operations will be provided in each technology project specific work plan submitted for approval.

Schedule for entering into contracts: The contract for implementation of the first technology will be entered into in April 30, 1996.†**(COMPLETED)**

The project specific work plan for each technology will be submitted for approval within 120 days of entering into the contract.†

Schedule for initiating construction: Vendor will supply a fully constructed mobile system. Construction for each technology will be initiated within 30 days of approval of the project specific work plan.†

Schedule for conducting systems testing:
Operational Readiness and systems testing will be completed 120 days after completion of treatment facility construction.†

Schedule for commencing operations:
Treatment will be initiated within 14 days of completion of system testing for each technology.†

Schedule for processing backlogged and currently generated mixed wastes: February 28, 1997 through September 30, 2001.
A schedule for processing backlogged and currently generated mixed waste will be provided by technology in each project specific work plan submitted for approval.

Project Completion Date: September 30, 2001† The last project conducted as part of the Ohio Mobile Chemical Treatment System was completed on August 19, 1998.

† Denotes milestone dates

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3.1.7 Waste Streams for which Technology Exists - Preferred Option: TSCA Incinerator, Phase 1

Project Name: Liquid Mixed Waste Project

The FEMP mixed waste streams (liquid portion only) for which the Preferred Option is identified as the TSCA Incinerator are listed in Table 7 of the Background Volume. Treatment of these waste streams will occur off-site at the DOE K-25 site in Oak Ridge, Tennessee.

The FEMP is currently allotted 693,000 pounds or approximately 318,780 kilograms of mixed low level waste treatment capacity per year at the TSCA Incinerator. The FEMP plans to bulk mixed waste for shipment to the TSCA Incinerator. Detailed information on this treatment is located in Section 3.1.7 of the Background Volume.

Bulking and transport of these wastes was implemented as part of CERCLA Removal Action #9 (RA #9). These activities began after obtaining Ohio EPA approval. Activities conducted under this removal action have been incorporated into the Operable Unit 3 Final Record of Decision (ROD).

The milestone dates for TSCA Incinerator are shipping dates. The shipping dates are dependent on acceptance of the waste by the TSCA Incinerator and the State of Tennessee.

The Liquid Mixed Waste Project is designed to address treatment and disposal of all liquid mixed waste currently in storage through the WWTS or the TSCA Incinerator Preferred Options.

MIXED WASTE STREAMS FOR WHICH TECHNOLOGY EXISTS

Project Start Date: October 1994 **(COMPLETED)**

Schedule for submitting all applicable permit applications: Not applicable. This project was initiated as part of RA #9. **(COMPLETED)**

Schedule for entering into contracts: Contracting complete (DOE facility to DOE facility agreement). **(COMPLETED)**

Schedule for initiating construction: No construction is required for this project.

3.1.7 Waste Streams for which Technology Exists - Preferred Option: TSCA Incinerator (cont.)

Schedule for conducting systems testing: Tank set-up and testing were completed in October 1994. October 31, 1994 **(COMPLETED)**

Schedule for commencing operations: Operations began with the bulking of waste streams. June 30, 1995 **(COMPLETED)**

Schedule for processing backlogged and currently generated mixed wastes: June 30, 1995 through September 30, 1996 **(COMPLETED)**

Project Completion Date: Shipments from the FEMP to the TSCA Incinerator will be complete by September 30, 1996† **(COMPLETED)**

3.1.7.1 Waste Streams for which Technology Exists - Preferred Option: TSCA Incinerator, Phase II

Phase II of the TSCA Incinerator Preferred Option provides updated schedules for the shipment of individual batches of liquid mixed waste to the TSCA Incinerator and/or commercial mixed waste incineration facilities. These schedules are based on the TSCA Incinerator ~~FY 2000~~ Burn Plan and commercial facility waste acceptance timeframes. Since capacity at the TSCA Incinerator is allocated on a fiscal year basis, schedules for shipping additional batches of liquid mixed waste will be established in future amendments to the STP.

Schedule for Completing Shipment: Shipment of ~~Batches 9, 10 and 11~~ Batch 9 to the TSCA Incinerator will be completed by September 30, 2000†. (COMPLETED) Shipment of Batch 10 to the TSCA Incinerator or a commercial mixed waste incineration facility will be completed by September 30, 2001†. Shipment of Batch 11 to the TSCA Incinerator will be completed by September 30, 2002†.

Schedule for Providing Additional Milestones for Shipment: Schedules for shipping additional batches of mixed waste to the TSCA Incinerator or a commercial mixed waste incineration facility will be provided by ~~December 31, 2000~~ December 31, 2001†.

† Denotes milestone dates

3.1.8 Waste Streams for Which Technology Exists - Organic Treatment Project

The Organic Treatment Project involves the off-site shipment of mixed wastes containing organic constituents and debris for treatment to Materials and Energy Corporation (M&EC) in Oak Ridge, Tennessee or an alternate off-site mixed waste treatment facility. Treatment at M&EC will be conducted under the DOE complex-wide Broad Spectrum Contract.

Schedule for Entering into Contract: March 31, 1999†**(COMPLETED)**

Schedule for Initiating Preparation of Wastes for Transport: September 15, 1999† **(COMPLETED)**

Schedule for Completing Shipment for Off-Site Treatment of Mixed Wastes Identified in the ~~1998~~ Most Recent Version of the STP Annual Update: ~~September 30, 2001 †~~ July 30, 2003†

† Denotes milestone dates

3.1.9 Waste Streams for Which Technology Exists - Inorganic Treatment Project

The Inorganic Treatment Project involves the shipment of mixed waste off-site to a commercial facility for treatment of inorganic constituents.

Schedule for Entering into Contract: March 31, 2001†

Schedule for Initiating Preparation of Wastes for Transport: October 1, 2001†

Schedule for Completing Shipment for Off-Site Treatment of Mixed Wastes identified in the ~~1998~~ Most Recent Version of the Annual STP Update: September 20, 2002†

† Denotes milestone dates

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3.1.10 Waste Streams for Which Technology Exists - Uranium Waste Disposition (UWD) Materials and T-Hopper Wastes

The FEMP has identified mixed waste included in a population of uranium materials declared waste in December 1998. A portion of these materials are enriched (contain >1% U235) and may require blending to reduce uranium content prior to processing. In addition, the FEMP has identified approximately 450 pounds of mixed waste containing transuranic constituents above 100 nCi/g and 350 pounds of mixed low-level waste. These wastes are currently being stored in two T-Hopper containers. Stabilization options being evaluated for these waste streams include on-site treatment or securing a contract with an off-site treatment facility.

Schedule for Entering into Contract: The contract for implementation of this preferred option will be entered into by June 30, 2003†.

Schedule for Providing Additional Milestones for Treatment: Additional milestones for treating the UWD inventory and the T-Hopper Wastes will be provided by December 31, 2003†.

† Denotes milestone dates

3.1.11 Waste Streams for Which Technology Exists - Thorium Legacy Mixed Waste Stabilization Project

The Thorium Legacy Mixed Waste Stabilization Project involves treatment of the thorium legacy mixed waste inventory. These wastes will be stored in an approved location while evaluating stabilization option which include on-site treatment or securing a contract with an off-site commercial treatment facility.

Schedule for Entering into Contract: The contract for implementation of this preferred option will be entered into by September 30, 2002†.

Schedule for Providing Additional Milestones for Treatment: Additional milestones for treating the thorium legacy mixed waste inventory will be provided by September 30, 2002 †.

† Denotes milestone dates

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3.2 Mixed Waste Streams for which Technology Exists But Needs Adaptation or for which No Technology Exists

The FEMP has not identified any mixed waste streams for which significant adaptation and technology development is required for treatment. After final characterization, which will occur as a part of the project management process, certain variances may be requested. Specifically, there may be some constituents for which the LDR treatment standard is incineration. The FEMP may request a variance to allow chemical destruction or stabilization. Also, certain debris may require a technology which is not practical, therefore, a variance may be requested for these wastes.

3.3 Mixed Waste Streams Requiring Further Characterization or for which Technology Assessment Has Not Been Done

All FEMP mixed low level waste streams identified in the STP have a Preferred Option for treatment.

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5.0 This section intentionally left blank.